

I CLAIM:

1. A system for configuring networks, the network configuration being based on an end-to-end service requirements, said system comprising:

a database for storing a set of configuration parameters, each configuration parameter relating to a setting on a device in the network;

a database having a set of intermediate abstractions, each of said intermediate abstractions representing a decomposition of the end-to-end service requirement; and

a processor coupled to said configuration database and said intermediate abstractions database, said processor executing the method step of,

compiling the set of intermediate abstractions into configurations parameters.

2. The system of claim 1 wherein said processor further executes the method steps of:

checking said compiled parameters against said library requirements to determine if there inconsistency between said compiled parameters; and

sending said compiled parameters to said configuration parameters database if said checking results in no inconsistencies.

3. A system for diagnosing configuration errors in a network, the network being based on a set of end-to-end service requirements, said system comprising:

a database for storing a set of configuration parameters, each configuration parameter relating to a setting on a device in the network;

a database having a set of intermediate abstractions, each of said intermediate abstractions representing a decomposition of the end-to-end service requirement; and

a processor, coupled to said configuration parameters database and to said intermediate abstractions database, for recursively determining the consistency between the configuration parameters and the intermediate abstractions; and

means coupled to said processor for creating a record of each inconsistency found.

4. The system of claim 3 wherein said intermediate abstractions are expressed as Boolean functions of the configuration parameters.

5. The system of claim 3 wherein said configuration parameter database comprises a
5 LDAP directory having configuration information about all the devices in the network.

6. A method for detecting network configurations errors based on a set of vendor neutral requirements that govern performance in the network, said method comprising the steps of:

10 creating a set of configuration parameters, each configuration parameter relating to a setting on a device in the network;

recursively determining if said at least one vendor neutral requirement is true based on said created set of configuration parameters; and

creating a record of said at least one translated end-to-end service requirements that were determined to be false, said record representing the diagnosis.

15 7. The method in accordance with claim 6 the vendor neutral requirements are created by decomposing end-to-end service requirements.

8. A method for configuring networks, the network configuration being based on end-to-end service requirements, said method comprising the steps of:

20 storing a set of configuration parameters in a database, each configuration parameter relating to a setting on a device in the network;

storing a set of intermediate abstractions in a database, each of said intermediate abstractions representing a decomposition of the end-to-end service requirement; and

compiling the set of intermediate abstractions into configurations parameters.

9. The method of claim 8 further comprising the method steps of:

checking said compiled parameters against said library requirements to determine if there inconsistency between said compiled parameters; and

sending said compiled parameters to said configuration parameters database if said checking results in no inconsistencies.

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